Technical Workshop on Estuarine Habitat in the Bay Delta Estuary

Relevance of the Low Salinity Zone to Estuarine Habitat and Protect Fish Populations

27 March 2012, 9:00 am – 4:30 pm
SACOG Board Room, Suite 300 (3rd floor)
1415 L Street, Sacramento, CA, 95814

Purposes of the Workshop

❖ Improve our collective understanding about the attributes of estuarine habitat most important to pelagic fishes in the Bay Delta Estuary.

❖ Develop information relevant to the question of whether declines in abundance of important fish species are best linked to habitat changes or to other ways of characterizing changes.

❖ Identify the kinds of actions, including changes in location of the low salinity zone (LSZ0, most likely to produce desired changes in abundance of important fish species.

❖ Generate scientific information that EPA can translate into findings and recommendations to support the State's Comprehensive Review of the 2006 Water Quality Control Plan for the Bay Delta Estuary.

Workgroup Questions[1]

1. What are the key points of scientific agreement, disagreement, and uncertainty about the environmental factors, including location of the LSZ, most important to abundance of pelagic fishes in the Bay Delta Estuary? Given these points, what actions could be taken to increase abundance of pelagic fishes with reasonable assurance of both beneficial effects and conservation of valuable resources?

2. What is needed to update and improve the State's current approach of managing estuarine habitat or managing other factors important to the abundance of pelagic fish? .What key scientific findings and emerging modeling techniques should be applied?

3. What are the drivers in the quality and quantity of estuarine habitat during each season of the year? What factors, including location of the LSZ, are most important to those drivers?

[1] Tim Vendlinski drafted these questions with assistance from Brock Bernstein, Erin Foresman, Robin Grossinger, Bruce Herbold, Michael MacWilliams, Stephen Monismith, and Karen Schwinn. Comments are welcome!

4. How can models be used to forecast the response of important attributes of habitat or other measures of change to changing precipitation patterns, rising sea levels, and restoration scenarios?

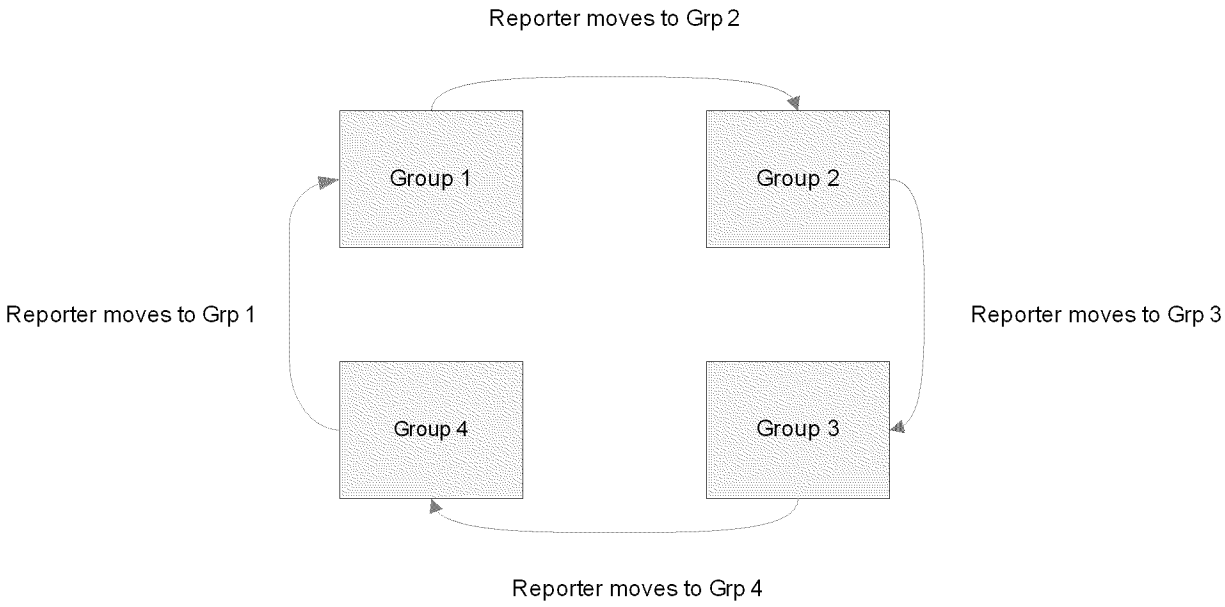
Agenda

9:00 – 9:10	Welcome and introductions	Karen Schwinn (EPA)
9:10 – 9:20	Agenda overview	Brock Bernstein
9:20 –9:45	Historical Perspectives on Factors Important to Ecosystem Changes and, in Particular, to Changes in Abundance of Important Species of Fish	Robin Grossinger (SFEI)
9:45 –10:10	Modeling Abiotic Estuarine Processes using SUNTANS	Stephen Monismith Stanford University
10:10 –10:35	Modeling Abiotic Estuarine Processes using UnTRIM	Michael MacWilliams Delta Modeling Assoc.
10:35–10:40	Other Models of Relevance to Ecosystem Changes	Brock Bernstein
10:40 – 10:50	Reflections on presentations, transition to workgroups, and workgroup instructions and assignments	Brock Bernstein
10:50 – 12:15	First workgroup session – Prepare first draft of discussion summaries	
12:15 – 1:30	**Working lunch** Second workgroup session – Review and revise discussion summaries	
1:30 – 2:30	Third workgroup session – Review and revise discussion summaries	
2:30 – 2:45	**Break**	
2:45 – 4:15	Group discussion – discussion summaries	Brock Bernstein
4:15 – 4:30	Wrap up and adjourn	Brock Bernstein

Process for Technical Teams

The following workshop process is intended to increase the amount of direct interaction among participants, accelerate the refinement of ideas and products through multiple rounds of review and revision, and ensure that participants have the opportunity to address all topics.

- Break into four pre-assigned technical teams of equal size.
- Designate a team leader and reporter for each team (already done).
- Assign each team (and each reporter) one of the four workshop questions.
- The reporters are paired with the questions and will rotate among the four teams (see figure below). This builds momentum toward enriching the answer to each question, and provides continuity as each question is cycled from team to team.
- Team leaders are charged with keeping their team focused on the task at hand, bringing the best work out of each individual, synthesizing ideas to make conceptual breakthroughs, and ensuring ideas are accurately captured and conveyed to the reporter.
- **First session:** Each team responds to the assigned question.
- Reporters and questions rotate to the next team.
- **Second session:** Reporters brief their new team on the progress made by the previous team toward answering the assigned question. Each team critiques and revises the previous team's product.
- Reporters and questions rotate again.
- **Third session:** Repeat the briefing, critique, and revision of the previous group's product.
- **Group Discussion:** The workshop facilitator will reconvene all the workshop participants. Reporters and team leaders will: (i) describe how the answer(s) to each question evolved as they moved from team to team; and (ii) summarize the key points catalyzed during the collaborative process.



[2] See Dugdale's model
[3] See models by Luoma & Presser (fate of Se) and by Jan Thompson (clam abundance)